

Notice of Allowability

Application No.

09/870,676

Applicant(s)

MIKI ET AL.

Examiner

Zachary C. Tucker

Art Unit

1624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 22 December 2003.
2. ☒ The allowed claim(s) is/are 1,5,6,9-13,15 and 17-23.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Response to Amendment

As requested in the correspondence from applicants dated 22 December 2003, which was in reply to the Office action dated 20 June 2003, claims 1 and 17-20 have been amended, claim 14 cancelled, and new claim 23 added.

Status of Claim Rejections - 35 USC § 112

In the previous Office action, dated 20 June 2003, claim 20 was rejected under 35 U.S.C. 112, second paragraph, for lack of antecedent basis of certain functional groups recited in the definition of R^2 . In view of the amendment to claim 20 deleting these recitations, the rejection of claim 20 under 35 U.S.C. 112, second paragraph, is hereby withdrawn.

Status of Claim Rejections - 35 USC § 102

In the previous Office action, dated 20 June 2003, claims 1, 5, 9-13, 17, 21 and 22 were rejected under 35 U.S.C. 102(b) as being anticipated by Urbanski et al.

The rejections of claims 1, 5, 9-13, 17, 21 and 22 under 35 U.S.C. 102(b), based on Urbanski et al, are hereby withdrawn in view of the amendment to claims 1 and 17, requiring the organic base to comprise N-methylmorpholine.

Applicants' remarks on page 22 of the correspondence dated 22 December 2003, first paragraph, are noted. The carboxylic acid activating agent of formula (3) of the present invention is not required to a symmetrical anhydride when "X" is a group of the formula $(R^2)_pY(O)_nO-$. The recitation "wherein R^2 is the same as defined above" only requires that R^2 be selected from the same group as is recited in the definition of R^2 . The carboxylic acid activating agents employed in Urbanski et al's "Stage 2" on

page 1229, though they are unsymmetrical anhydrides, are within the scope of the definition for (3). Therefore, the rejections based on Urbanski et al are withdrawn in view of the amendment requiring the organic base to comprise N-methylmorpholine.

In the previous Office action, dated 20 June 2003, claims 1, 5, 9, 11, 21 and 22 were rejected under 35 U.S.C. 102(b) as being anticipated by Gaede.

The rejections of claims 1, 5, 9, 11, 21 and 22 under 35 U.S.C. 102(b), based on Gaede are hereby withdrawn in view of applicants' arguments.

Gaede discloses addition of a carboxylic acid activating agent to a solution of carboxylic acid and organic base, the opposite of the claimed order of addition. Gaede does not teach or suggest any other order of addition, and also does not suggest employing N-methylmorpholine as the basic reagent.

In the previous Office action, dated 20 June 2003, claims 1, 5, 9, 11, 21 and 22 were rejected under 35 U.S.C. 102(b) as being anticipated by Fife et al.

The rejections of claims 1, 5, 9, 11, 21 and 22 under 35 U.S.C. 102(b) as being anticipated by Fife et al are hereby withdrawn in view the amendment to instant claim 1. Fife et al teaches simultaneously combining all of carboxylic acid an organic base (which is a polymer), and carboxylic acid activating agent. The present amendment to claim 1, dated 22 December 2003, now requires the organic base to comprise N-methylmorpholine, which is outside the scope of Fife et al. Fife et al's organic bases are pyridine-substituted polymers.

In the previous Office action, dated 20 June 2003, claims 1, 5, 6, 9-15, 17-19, 21 and 22 were rejected under 35 U.S.C. 102(b) as being anticipated by Benoiton et al.

Claim 14 has been cancelled, mooted the rejection of that claim based on Benoiton et al.

The rejections of claims 1, 5, 6, 9-13, 15, 17-19, 21 and 22 under 35 U.S.C. 102(b) as being anticipated by Benoiton et al are hereby withdrawn in view of applicants' arguments.

"Adding 'a' to 'b'" does not have the same meaning as "adding 'b' to 'a'," in the context of the chemical arts.

In the previous Office action, dated 20 June 2003, claims 1, 5, 6, 9-15, 17-19, 21 and 22 were rejected under 35 U.S.C. 102(b) as being anticipated by Ramage et al.

Claim 14 has been cancelled, mooted the rejection of that claim based on Ramage et al.

The rejections of claims 1, 5, 6, 9-13, 15, 17-19, 21 and 22 under 35 U.S.C. 102(b) as being anticipated by Ramage et al are hereby withdrawn in view of applicants' arguments. Ramage et al only discloses a preparation of mixed phosphinic-carboxylic anhydrides by adding the carboxylic acid activating agent to a solution of carboxylic acid and organic base. This is the opposite order of addition than is specified in the instant claims. The examiner now agrees with applicants, that in the context of the chemical arts, the word "adding" does not have a simple mathematical definition, but in fact does carry an implied order when a claimed method recites addition of one thing to another.

In the previous Office action, dated 20 June 2003, claims 1, 5, 6, 9-13, 15, 17-19, 21 and 22 were rejected as being anticipated by Applewhite et al.

The rejections of claims 1, 5, 6, 9-13, 15, 17-19, 21 and 22 as being anticipated by Applewhite et al are hereby withdrawn in view of the amendment to claims 1, 17 and 18, requiring the organic base to comprise N-methylmorpholine. Applewhite et al does not suggest N-methylmorpholine as an organic base. The only specific compounds that Applewhite et al teaches for the organic basic reagent are triethylamine, triisopropylamine, tri-*n*-butylamine, pyridine, N-methylpiperidine and N-ethylpiperidine.

Allowable Subject Matter

Claims 1, 5, 6, 9-13, 15 and 17-23 are allowed.

The following is an examiner's statement of reasons for allowance:

After consideration applicants' arguments dated 22 December 2003, specifically the remarks found on page 20, starting with the third full paragraph, continuing through page 21, and also those found starting with the third full paragraph on page 22, through second full paragraph on page 23, the rejections under 35 U.S.C. 102(b) based on Gaede, Fife et al, Benoiton et al, and Ramage et al are no longer seen as appropriate.

As urged by applicants, the instant claims do not to read on just any possible manner of combining a carboxylic acid reactant of formula (2) and organic base with a carboxylic acid activating agent of formula (3), but rather, the claimed method when read in light of the specification and also in consideration of remarks made by applicants in response to prior art rejections is limited to only what is achievable by placing the carboxylic acid of formula (2) and organic base in a solution of the carboxylic acid activating agent of formula (3), and does not read on allowing a solution of (3) to drip into a solution of (2) and the organic base, as taught in Gaede, Fife et al, Benoiton et al

and Ramage et al. The order of addition taught in Gaede, Fife et al, Benoiton et al and Ramage et al is the opposite of what is specified in the instant claims.

The rejections under 35 U.S.C. 102(b) based on Urbanski et al and Applewhite et al have been overcome by the present amendment, dated 22 December 2003.

The declaration under 37 C.F.R. 1.132, made by co-inventor Takashi Miki, has been considered. No comparison between yields of mixed amino acid/alkyl carbonate anhydrides obtained when the conventional order of addition is followed, and the order of addition specified in the instantly claimed method is made in the declaration. Benoiton et al does not report the yield obtained when $R^1\text{OCO}$ -amino acid is allowed to reacted with the chloroformate – (page 279, “Mixed anhydrides for exploratory purposes”).

Benoiton et al, however, does not suggest reversing the order of addition disclosed therein, so the examiner does not believe a rejection under 35 U.S.C 103(a) based on Benoiton et al would be proper, as the instantly claimed order of addition is not within the teaching of Benoiton et al.

The declaration does not reproduce any procedure disclosed in Applewhite et al, and show that when N-methylmorpholine is employed as the basic reagent instead of triethylamine, a greater yield of the anhydrides made by the process disclosed in that patent is obtained. To prove unexpected results over Applewhite et al, a declaration under 37 C.F.R. 1.132 must demonstrate synthesis of the same types of compounds made by the Applewhite et al process. Applewhite et al does not disclose synthesis of alkyl carbonate/amino acid anhydrides.

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An updated search did not afford any prior art rendering the claimed method anticipated or obvious.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

All Post-Allowance Correspondence concerning this application must be mailed to:

Mail Stop Issue Fee
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Or you can fax them to the Office of Patent Publications at 703-308-5083, in order to expedite the handling of such correspondence as amendments under 37 CFR 1.312; information disclosure statements; and formal drawings. Sending Post-Allowance papers to Technology Center 1600 will only cause delays in matching papers with the case.

For information concerning status of correspondence sent after receipt of the Notice of Allowance, please contact the Correspondence Branch at (703) 305-8027. The Notice of Allowance also has an insert containing contact information on other items, including Issue Fees, receipt of formal drawings and the status of the application.
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